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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/521,199	09/21/2005	Sergey Anatoliyovich Piletsky	P08541US00/BAS	8648
881 7590 10/24/2008 STITES & HARBISON PLLC 1199 NORTH FAIRFAX STREET SUITE 900 ALEXANDRIA, VA 22314			EXAMINER MENON, KRISHNAN S	
			ART UNIT 1797	PAPER NUMBER
			MAIL DATE 10/24/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/521,199

**Applicant(s)**

PILETSKY ET AL.

**Examiner**

Krishnan S. Menon

**Art Unit**

1797

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 September 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3-15 and 17-21 is/are pending in the application.
- 4a) Of the above claim(s) 8-17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-7 and 18-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/S508)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

Claims 1, 3-15 and 17-21 are pending as amended 9/22/08. Claims 8-15 and 17 are withdrawn from consideration.

#### *Claim Rejections - 35 USC § 103*


**Claims 1,3-7 and 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murray (US 2003/0113234) and/or Wu (US 6,039,872) in combination with Singh et al (US 6,582,971).**

**Murray** teaches a method of making a substrate selective membrane by polymerizing a mixture comprising a template (iron vinyl benzoate complex), a functional monomer (eg. styrene), a crosslinker (eg. divinyl benzene), a pore former (eg. polyester), a plasticizer (nitrophenyl octyl ether: see working examples), and initiator - see paragraph 0016. After the membrane is formed, the ferric cation and the polyester are removed to form for the pores.

Murray does not teach the specific template compounds listed in the claims.

**Wu** teaches a method of making a crosslinked hydrophilic membrane using mono and diacrylates with initiator and pore forming agents. This reference teaches the base method of making the membrane such as disclosed in applicant's working examples, without the template compounds. See abstract and examples.

**Singh** teaches making membranes with imprinted polymer composites. Singh at column 1, line 53 – column 2, line 4 teaches:

"Molecular  of synthetic polymers is a process where functional and cross-linking monomers are copolymerized in the presence of the target analyte, which acts

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as a molecular **template**. Before polymerization, the functional monomers either form a complex with the **template** via non-covalent interactions, or are covalently coupled forming a polymerizable derivative of the **template**. After polymerization, the functional groups of the monomers are held in position by the highly cross-linked polymeric structure. Subsequent removal of the **template** by solvent extraction or chemical cleavage reveals binding sites that are complementary in size and shape to the analyte. In this way, a molecular memory is introduced in the polymer, which is now capable of rebinding the analyte with very high specificity."

And in column 8, lines 4-23:

"Alternatively, the **inerted** polymer composites can also be cast as a **membrane** or coated onto existing membranes. The resulting separation membranes are highly specific for the target biomolecule."

See the claims of Singh, particularly claims 1 and 3, which describe the same template materials as claimed by the applicant. Singh does not teach the specifics of making the membrane as claimed.

It would be obvious to one of ordinary skill in the art to combine these references to arrive at applicant's invention, to make membranes with specific and complementary binding sites for binding analytes as taught By Singh. See KSR Int'l. v. Teleflex Inc., 127 S. Ct. 1727, 1732, 82 USPQ2d 1385, 1390 (2007). "it is commonsense that familiar items have obvious uses beyond their primary purposes, and a person of ordinary skill often will be able to fit the teachings of multiple patents together like pieces of a puzzle". "The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results."

### ***Response to Arguments***

Arguments are moot – new grounds for rejection

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Krishnan S. Menon whose telephone number is 571-272-1143. The examiner can normally be reached on 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David R. Sample can be reached on 571-272-1376. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Krishnan S Menon/  
Primary Examiner, Art Unit 1797